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away and the seeds scraped out and collected. After further drying, the flesh is sliced spirally from side to side, beginning at the stem end, in a strip 2.5 to 5 cm. in width. This coil, 1 to 1.5 m. long, is hung from a pole to dry in the sun. While it is still pliable, it is folded back and forth on itself into a bundle (*hamtekwi'lîvâ*), 30 to 45 cm. long, and bound with one end of the strip. This is set aside to dry thoroughly before it is placed in the storehouse for winter use. Squash so dried will keep through an entire year. Melons are also grown. 251

Sunflowers (*dk'ôlâ*) are grown for their seed. Cotton (*Gossypium kopi* Lewton) is raised from seed obtained from the Hopi; the only use for this product is in the strike-a-light. The seeds of wild food plants are not planted; some, such as pigweed, grow in the fields. Peaches and figs, modern foodstuffs, are eaten fresh. Peaches are also torn in two and pitted, while figs are opened, before they are spread on the rocks to dry. 241 [249] [372] [251]

Two varieties of tobacco are known, *úvâ*, and *kâθô'dn„lu'vâ* (Coyote's tobacco; *Nicotiana trigonophylla* Dunal). Myth has it that the second was grown by Coyote for his own use. Both grow wild on the plateau and in the canyon above the village: their leaves are similar, but the smoke tastes somewhat differently, according to the natives. Tobacco (both varieties?) is grown only on the plateau. A mesquite tree is cut down and burned. The tobacco seeds are thrown into the dead ashes (the soil is not dug up). Willow is not used as a substitute. 249

Wild Food Products

These are a valuable adjunct to the food supply, especially from the autumn until spring during the residence on the plateau. During this period they lead a wandering life, families going off in the fall to a place where someone had reported piñon nuts lying plentifully on the ground; winter finds them to the east, hunting in the Coconino Basin, dropping down to the benches of the Grand Canyon in the spring for mescal, and so on. Women and children are sometimes left to gather seeds while the men go off to trade. 221 222 [462]

Mescal (the agave plant), which grows on the canyon benches, is ripe in May when the flower stalk is 30 to 60 cm. tall. The plant is severed entire by pounding a chisel-shaped buckthorn stick (*lôp'ô''l*) about 1 m. long, 3 cm. diameter, against its base. The outside leaves of the inverted plant are trimmed of their green portion with a special hatchet (*dgwidjâ*). This consists of a broad stone blade set in a slot midway in the length of a short handle, 30 cm. long, (sometimes of piñon wood), where it is held fast with glue or pitch and by lashings. A load of [412] 252 [412]

MANUFACTURES

Basketry

Baskets are the most important domestic utensils. A dozen or so may be found in each household; two or three burden baskets, half a dozen trays holding foodstuffs, one or two parching trays, a water bottle or two, and in the old days, boiling baskets. Basketry is entirely women's work, to which they devote most of their spare time, particularly the long midday period when household duties are light. Wherever women gather, basketry may be seen; the hostess working at her products, the

Fig. 6 *a* (50.2-1634), *b* (50.2-1631), *c* (50.2-1230), *d* (50.2-1237), *f* (50.2-1643), *g* (50.2-1645). Havasupai Basketry Forms. *a*, Burden basket; *b*, Tray; *c*, Boiling Basket; *d-g*, Water bottles.

guests plucking and preparing twigs from the nearby bushes, or more commonly helping the hostess at such tasks. Women do not usually carry their unfinished wares further than a neighbor's camp; not even the coiled baskets which are worked on only intermittently and regarded much as our women do embroidery. Twined baskets are worked on more consecutively; a tray basket, depending on its size, may be completed in a few days; a burden basket is worked at off and on for a month. They consider twining hard work because continual pulling at the stiff wefts bruises the fingers badly. Expertness is recognized and prized; a few women are widely acknowledged as preëminent.

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323 317 [462] Pots are made by women alone. The best clay, the color of adobe, occurs in a deposit located at Pine Spring west of Cataract Canyon. As this is very hard, chunks must be pried off with a deer antler pick, and are then reduced to a powder by crushing between two stones. Fine stones, procured from an ant hill, are added, the whole being kneaded with water into a stiff dough. Cylinders, 2 cm. in diameter, are rolled 323 out between the palms and coiled in a clockwise direction on a tray basket, patted on top the whi e with a small, flat, smooth stick to make

[415]

Fig. 16 (50.2-1668). A Coarse Undecorated Vessel of Clay.

them adhere. Both basket and stick are kept wet with a concoction of boiled antler, weed roots, and other ingredients. When the flat coil reaches a diameter of 20 cm. the sides are built up by coiling in the same manner; the potter supporting them with a smooth, round pebble inside while the exterior is paddled. When the vessel is complete, this same pebble is used to smear the concoction over the inner and outer surfaces, rubbing vigorously, in order to render the clay hard and prevent cracking. The vessel walls are of a uniform thickness, 0.7 to 1 cm.; the lip is no thinner. The completed vessel is set in the sun for two days or until it has thoroughly dried. A pile of dry wood of any sort, 70 cm. or more in height, is prepared and set alight early in the morning. After it

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323 has burned down, the coals are raked away from the center, the pot set right side up on the ground, and buried, inside and out, in coals. A small amount of brush is then set ablaze on top of this, presumably to create a draft. After baking all day and night, the pot may be removed next morning. Only one pot is fired at a time. These vessels are said never to have cracked in firing.

[252] Cornmeal mush is always the first thing cooked in the vessel. A ladle full is given to every comer, more being cooked in the same pot as the supply wanes, in the spirit of ascribing inexhaustibility to it. Pots are supported on three stones when cooking.

[356] Sometimes the bottom burns when cooking so that fine cracks appear, although the vessel does not break. A sort of "alkaline clay,"[1] obtained from the creek bed, is smeared over the faulty spot, beyond which no further attention is required.

[439] Pottery is obtained from the Hopi for storage uses, but not for cooking.

[276] Clay pipes (*amal'há'u*) are made of material obtained from the creek bed. The bowl, 5 cm. high, is fitted with an arrow reed stem, 7.5 in. long, in one side. Cigarettes (*wátamákwĭ'dĭgá*) are made of cornhusk, but not of reeds.

Skin Dressing

281 [462] [439] A Havasupai man's sole specialized product is the tanned deerskin. It is strictly a sex-limited industry, the handling of the skin from flaying the carcass to the finished moccasin or woman's dress is man's work alone. It is also the chief article of trade, which is, on the whole, another male activity.[2]

The fresh skin is stretched on the ground hair side down, with large stones on the neck, tail, and legs, and with smaller ones along the edges. After four or five days of drying in the sun it is as stiff as a board. If the skin contains much fat, it is dried in the shade, otherwise it will putrefy. The rawhide is sprinkled with water until it can be rolled into a loose cylinder, in which condition it can be stored for future use for as long as three or four months, by which time the insects will have gotten at it.

To dehair the rawhide, it is tied down in the creek to soak for a day and night. Dehairing commences with the dawn the next day, not because the sun would dry the hide, but because the process is laborious.

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[1] Unidentified: the creek is heavily charged with lime salts.

[114] [2] Cushing observes that these people are famous among other Indians for their buckskins [(a), 353]. I fail to see any superiority over the products of neighbouring tribes, or those of other North American Indians represented in museum collections.

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pot at its middle. This is illustrated for the Pima, Yavapai, Havasupai, Mohave, Cahuilla, and Southern Diegueño. Navaho jars are taller and narrow; San Carlos are said to be cylindrical with round to conical bases. Shivwits pottery is also pointed at the bottom.

Perhaps corresponding to the Havasupai custom of cooking cornmeal mush in the new vessel, the Cocopa cook it, smear it on the vessel, but throw it away,[1] while the Pima and Papago pour flour paste inside and out of the red hot pot, and the San Carlos coat it with a mixture of clay and *sphaeralcea emoryi*.

The Havasupai pipe is exceptional in having a reed stem fitted in the side of a clay bowl. The nearest form is that of the Diegueño which has the clay of the bowl pinched out at a sharp angle into a short stem.[2] This would appear to be merely a bent tubular pipe were it not for a nipple below the bowl which is suspiciously like that of our own clay pipes. Elsewhere in the Southwest and California the tubular pipe is used; e.g., Navaho, Western Apache, Jicarilla, Luiseño, Washo, Achomawi, and Atsugewi.[3] It is interesting to note that the older pipes of the Cheyenne were straight tubes of bone or stone.[4]

Skins are dressed by the Navaho by a process practically identical with that of the Havasupai. Descriptions from other tribes are so meager that I do not know how far details are similar. Some of the Southwestern tribes at least do not smoke the skins, (Navaho, Havasupai, and Shivwits), others to the north do (Mompa—for whom it is a recently acquired trait,—Kanab, Uintah, Wind River Shoshoni, Paviotso, Achomawi, Klamath and Modoc).[5] Smoking is also general north of the Basin and eastward in the Plains.

Skin dressing is wholly the work of men among the Havasupai, as among Navaho, Yavapai, and Cocopa also. Zuñi men do all the sewing, and as is also customary in other pueblos (Cochiti, Hopi, e.g.) make the moccasins. In this connection we note that Paviotso men make their rabbitskin blankets.[6] On the other hand, skin dressing and working is a woman's task in the Plains, which suggests that in the Southwest the Pueblo idea of men weaving garment materials has been transferred to the preparation of skins by men of these tribes.

[1] Field notes of R. H. Lowie.
[2] Spier, (a), 348; Hays, (d), Pl. XI, Fig. 20.
[3] Franciscan Fathers, 287, 305; Matthews, (f), 314; Whipple, Eylmank, and Turner, 47; Russell, (a), 267; Barrkman, 212, 210; Washo data from Dorter H. H. Lowie, 1926; Dixon, (e), 214; J. A. Mason states that the Salinan and Yaudanchi used reeds, but only as straws for drinking, but elsewhere he speaks of the Salinan "pipe" ((a), 142, 183).
[4] Grinnell, (b), I, 208.
[5] Shufeldt, (b); Lowie, (i), 226ff; Mason, O. T., (e), 272.
[6] Corbusier, 283; Stevenson, M. C., (b), 371; Dumarest, 148; Hough, (d), 70, 72.

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342 [177] The log house built in imitation of the Navaho is a polygonal structure of horisontally laid logs (Fig. 33). The roof is formed of lesser beams which are laid so that each consecutive tier cuts the angles formed by that below, thus drawing the walls into a very flat dome. This is covered with brush and dirt. Such houses are about 5 m. in diameter and about 2.5 m. high.

The second native type is simply the common rectangular flat-roofed shade which has been walled in (Fig. 34). The shade is built on four heavy forked posts (25 cm. in diameter) set in the corners of a square, about 3 m. on a side. Posts are also commonly set at the mid-points of two sides, and sometimes a third row of three is set down the center of the house. In setting such a post, dry sand is poured into the hole in which it stands, the pole is shifted up and down until the sand settles compactly about it, then the hole is filled with damp dirt, which is rammed home. Rafters (15 cm. diameter) lie in the forks of corresponding pairs or trios, about 2.5 m. from the ground. Poles are laid close together transversely on these rafters (or on an intermediate set), on which brush and then dirt is spread. This completes the shade as found in most camps, but if a house is desired three or four thatched walls are added (Fig. 35). Poles are set vertically into the earth along the sides about 30 cm. apart. Light poles are tied horisontally at about the same interval outside of these. This frame is then thatched in the ordinary fashion with long willow brush. Two or three poles are tied horizontally over the thatch to hold it in place. Sonpweed leaves are usually used for tying all poles and thatch.

The dirt floor of houses is never treated in any way. In fact, the sand is generally thrown back from the center of the house against the walls in the course of time, so that the structure appears to cover a slight excavation.

Practically all the work of house or shade building is done by men. [462] At least, they perform all the heavy labor of cutting and setting posts and beams. Thatching and covering with earth are done by both men and women. There are no prayers or offerings made when building.

The interior arrangement of the dome-shaped house, the type most 354 in use, is not rigidly prescribed. The fireplace (*otúuv*) should be in the center, i.e., not necessarily under the smoke vent. This consists of a slight depression, in which three stones are placed to support a vessel. 352 Beds were usually on the side opposite the entrance. These were slight hollows in which cedarbark mats and rabbitskin blankets are placed. 513 Beds are often located with the head to the east, for in this position the

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DRESS AND ADORNMENT

Clothing

Both sexes are moderately well clothed, in fact, Garcés was struck 291
in 1776 with their contrast in this respect to the scantily clad Colorado River tribes.[1] A man wears a headband, shirt, breechclout, moccasins, leggings, and in more recent times, trousers. A woman's dress is a short under-apron, a dress consisting of two aprons, a long one worn in front and a shorter one in the rear, moccasins, and blanket. Young children go entirely naked; at six or seven boys are given shirts, and as they approach puberty they don nether garments. Girls assume complete dress earlier than boys. There are no stylistic differences of clothing or hair dressing marking maidens from wives.

Children run barefoot. Ordinarily women go barefoot about the camp where the sand is soft, but wear their moccasins to the fields or on journeys. Men, on the other hand, are never without them.

Men usually take pains to avoid exposure. The breechclout is worn at all times, even in the sweatlodge and when bathing. Women are equally careful to retain the under-apron, sleeping, bathing, and in the sweatlodge. The dress fashioned of two aprons is open down the side and exposes its wearer's thighs when seated: the front apron is drawn back between the legs.

All skin clothing is made by men, for the whole skin industry from 294
flaying the carcass to the manufacture of women's dresses[2] is in the 281
hands of the men. 462

The man's shirt (*nlguaid*) seems to have been based on the poncho 291
type of the Plains, but only variants resembling European garments are 294
now extant. Cushing observed that the shirt was [177]

> made from a single deerskin, a transverse slit in the center serving as a neck-hole; the sleeves, of two pieces of the same material, heavily fringed, are attached to the edge of the skin, either side of the neck-hole, and open down as far as the elbows. Save the seams at the shoulders and from the elbows to the wrists, no sewing is necessary in this peculiar coat; yet it is made to fit admirably by means of a belt or band, with which the ends falling down front and back are gathered about the waist.[3]

I was told that shirts are also made of two skins sewed together along the straight shoulders and down the sides. True sleeves are inserted. Triangular flaps were added to the neck hole front and back; that in the front is said to have been somewhat the broader. The type now in use

[1] Coues, 435.
[2] Compare the Western Apache (Bourke, (d), 123).
[3] Cushing, (a), 346.

[Text continues on p. 185]

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Pima, Southern Diegueño, Luiseño, a people of the vicinity of Santa Barbara, Salinan, Miwok, Southern and Northern Maidu, Shivwits and Kaibab Paiute, Paviotso, Gosiute, Southern (?) Ute, and Northern Shoshoni.[1] There is some variation in the details of manufacture which provides comparative data. The Southern Diegueño and Havasupai warp these upon rows of stakes; the Hopi do not. The Maidu resemble the Paviotso in warping them over two poles.[2]

Descriptions of hair dress are lacking in precision and the situation is somewhat complex. A style consisting of doubling up the long back hair into a knot or queue at the back of the head is common to the Havasupai, Hopi, Navaho, Zuñi, and the Rio Grande Pueblos. Yet there is considerable difference even here: the Pueblos bang the hair over the forehead and cut that at the sides square; the Havasupai, while they too use the bang, wear the hair at the temples long. The Rio Grande Pueblos are said to arrange it behind in two clubs.[3]

Westward of this group the style calls for the bang on the forehead but long hair behind, even artificially lengthened. There appear to be two general styles of treating this back hair. It is simply wrapped without braiding by the Yavapai, Apache-Yuma,[4] Chemehuevi,[5] and Southern Diegueño.[6] On the lower Colorado and Gila the back hair hangs in long plaits or rolls: Mohave, Yuma, Maricopa, Pima, and probably Cocopa.[7] The Maricopa and Pima alternatively arrange it in a club at the back. The Mohave and Walapai, like the Seri, also part it in the middle and allow it to hang loose. The Walapai sometimes wear a braid on each side. Like the Havasupai, the Maricopa and Cocopa have pendent ear locks.

The position of the Western Apache is not clear. The Tonto wore the hair banged at the eyebrows and longer behind, but not to the shoulders, or they cut it short all around. The San Carlos trimmed it, but wore no bang.[8]

[1] Stevenson, M. C., (b), 370; Hough, (d), 302; Franciscan Fathers, 141; Curtis, II 93; Russell, (d), 158; Spier, (c), 340; Sparkman, 230; Yates, 375; Mason, J. A., (a), 127; Ponce, 338, 351; Fay, 38; Dixon, (a), 148 (where the blankets are used more in the Sierras than in the Sacramento valley); Lowie, (j), 198, 216, 217, 228; Dellenbaugh, 178; Chamberlin, (b), 330; Lowie, (a), 178.

[2] Among the Paviotso weaving is the work of men, but sometimes of women. It would be interesting to know whether this is connected with Pueblo loom weaving, formerly a man's art, or with the manufacture of all clothing by men, as among the Havasupai.

[3] Stephen, 255; Franciscan Fathers, 404; Hough, (e), 245; Goddard, (c), 2nd ed., 85.

[4] "Long matted rolls of false hair behind" (Corbusier, 270); Bourke, (d), 414.

[5] "Gathered" by a narrow band, from which it hangs loosely down the back" — or does this mean a headband encircling loose hair? (Whipple, Ewbank, and Turner, 33).

[6] Spier, (c), 340.

[7] Heintzelman, 48; Trippel, 305; Russell, (d), 158; Cremony, 90; Sandefur, (a), 253; Bartlett, I, 402, II, 217, 230; Whipple, Ewbank, and Turner, 33. The Cocopa, a tribe found by Ohate at the mouth of the Gila in 1604-5, had a similar hairdress (Sandefur, (a), 111). Mason, 227, see also Lumholtz, (a), 9; Curtis, II, 93.

[8] Stuart, 418; Hrdlička, (d), 499.

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281
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422 Other property consists of houses, horses, dress, weapons and tools, and the immaterial possessions, shamanistic materials and chieftainship. 423 So far as houses may be conceived as individually owned, they belong to 342 the male head, since he can send his wife (and children?) away. But nothing else is possible, since the field in which it stands belongs to him. [462] [768] At least all the heavier work of house building is done by the men. The house is burned after the death of an inmate.

Horses and cattle are owned and herded by men alone. They have 422 had a fair number of these ever since Spanish days: Garcés found them [462] plentifully supplied with live stock in 1776.[1] Two or three good riding [175] horses are killed on their owner's death; others are given away. Saddles [768] are often burned or destroyed, sometimes being left on the horse when it is killed.

Personal possessions are not numerous. Men and women own their blankets and clothing, with perhaps a gala dress apiece. A man owns his weapons, tools, some buckskins, and perhaps a mask and charm or two; a woman her household utensils, pots, baskets, and field tools. In other words, each owns the articles peculiar to his sex. Husband and wife own and dispose of their possessions independently. I have never seen either [593] interfere with the other's transaction when selling specimens to me: 422 advice was, however, sometimes asked and acted on. Children own little 432 or no property, a condition which struck both Cushing[2] and myself as 858 being sharply in contrast with that at Zuñi. For instance, when buying a small burden basket used solely by a little girl, her mother set the price. Laying this simply to the girl's bashfulness, I offered the coin to her Zuñi-fashion, but her mother objected, claiming it as hers. To test this, I attempted to buy a similar basket from Jess's little daughter. This had been made and presented to her by her paternal grandmother. But the bargain was struck by her parents, although they turned the purchase money over to her. Perhaps boys are somewhat more favorably situated, since they freely sold their bows and arrows when I met them hunting in sport. These weapons were all products of their elders.

428 A dying man states his wishes respecting the disposal of his possessions. This includes land, although the succession to this is rather predetermined. [768] To be sure, most of his choicest belongings, clothing, weapons, horse, etc., are burned or buried with him. Such articles as are permitted to remain are inherited by his children or by members of his family. A woman's possessions go to her children or to her own family.

[1] Coues, 337 et seq.
[2] Cushing, (a), 321.

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The character of the spirit is not usually designated, but those specified include a wolf, a hawk, and the spirit of the mythical personage who made the deer. A pregnant woman may hear the cry of a certain small hawk (*ádjúdá*). Later the child pines, or if strong, he may often lie down as though fainting. A shaman called to sing over him, tells the mother, "When you were first pregnant, you heard a hawk calling. The child has a spirit in him; that is the hawk which entered at that time." Sometimes the shaman may succeed in carrying off the hawk spirit; then the child will live. 776 787 756

Despite the fact that the sun, the rocks and trees, etc., are addressed in prayer, spirits are not generally localized. Only one such is spoken of. 776 778

Long ago the mythical people made spirits and put them somewhere, so that one can dream of them, get them, and thus become a shaman. Spirits are not about here in the trees, rocks, etc., but one is in an ever-flowing pool (*shaŋapkitaidp*, black water in a round place) located in a little canyon beside the Colorado on the Walapai Reservation. It has a rough wall around it. People do not approach it, but when they look down on it from above, it wells up, although it is not hot. Strewn about are shell beads, arrowheads, deer bones with incised decorations (but no turquoise), placed there by some prehistoric people. Neither Walapai nor Havasupai offer to it. [782]

Several mythical beings are referred to in myths, such as Pagiyógá and Pagiyóvá. It seems doubtful that these are prayed to nor do they address the two culture heroes in prayer. [773] [782]

Spirits are the cause of illness, although this belief does not preclude that which holds minor ailments due to natural causes, infringements of taboos, or to illy-defined magical practices. A dead shaman may send his spirit into the body of one who corruptly imitates his songs; the creator of deer sent his into the man who wantonly slaughtered the animals; the hawk-spirit enters the body of the unborn child. 753

There are perhaps three types of shaman: those who cure (*gloiyé'*) weather shamans (possibly called by the same word), and practitioners of a sort (*glaslud*)[1] who specialize on fractures, wounds, or snake bites, in following the deer, etc. Apparently all of them dream, but only the first have familiar spirits. These three types are fairly distinct, but not exclusive; for example, Doctor Tommy, who divides his time with his Walapai father's people, and who performs most of the cures (including those of snake and scorpion stings) claims to bring rain and to have medicine to destroy the whites. Only men can be shamans. 756 791 778 [462]

Shamanistic power is acquired by inheritance or by dreaming. In 1918 there were three men recognized, Bob and Doctor Tommy, who both 756 791 776

[1] Compare Yavapai pe-esnacka, shaman (Corbusier, 333)

3:James T-5 (ca.1900) 1903
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515 136 breeding, for they are ubiquitous. Yet, strange to say, I have never known of an instance where a bed-bug has been brought out of the canyon by a visitor. Though I have been with the Havasupais scores of times I never detected one of these vermin either in my clothing or bedding. The breed seems to be peculiar to the warm, moist air of the canyon and to be unable to live away from it, for which we give hearty thanks.

136 Now and again scorpions may be found, and, after a rain, I have seen a score of hundred-legged worms (perfectly harmless) rolled up on the trail between the village and Bridal Veil Falls.

Rattlesnakes are not common anywhere in those portions of the canyon much visited by the Havasupais, but now and then one may be found on the trails or basking in the sun on the rocks near by. Elsewhere in this canyon and its many greater or lesser tributaries they are common, and the Indians can find any quantity if they are sent for them. In all my years of wandering to and fro, though, I have not seen a half-dozen rattlesnakes in Havasu Canyon.

Other pests are mosquitoes, gnats, and a small black fly which, in certain seasons, persistently lodges in the eye, causing considerable annoyance, and sometimes distress and pain. There are not many mosquitoes, though at times they are troublesome enough to satisfy one for their scarcity.

285 [462] Many of the women are expert basket makers, and in my book on Indian Basketry I have fully explained their methods of work and the charming nature of their designs. The Havasu Canyon is a basket maker's paradise, for the stream is lined for miles with willows [137] suitable for this work.

3:James T-5 (ca. 1900) 1903
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and beaten up and down in a bowl of water until a good lather and suds are produced. Then the operator takes a mouthful of the liquid and squirts it over the skin, which he manipulates and softens, rubs, scrubs, and pulls with his fingers and feet, moistening it again and again as occasion requires. Wild catskins are treated in the same way.

From this excellent buckskin the men make moccasins for themselves and their women. The first time I saw Kohot Navaho he was sitting naked, upon a blanket outside his hawa, his three wives near by, they cutting and preparing peaches for drying, he busily engaged making a pair of moccasins. The sole is of two or three thicknesses of heavy rawhide, to which the uppers of buckskin are deftly sewn, with strings of catgut or deer intestines, the holes being made by a bone awl.

Every summer trading-parties of both Hopis and Navahoes come down to the village, bringing blankets, ponies, pottery, and the like, for exchange. In 1898 there were three separate bands of Navahoes and two of Hopis. Trading is a serious process. Laws of barter or sale are first made, before the traders open their packs, and all the people are expected to abide by these loosely promulgated laws without question. Then the hawa of the Havasupai host is turned into a store. Poles are suspended in every possible direction on which to show off the blankets to best advantage. A crowd of chattering men and women stand outside, or, now and again, come inside, during the whole day, and at night-time the men who have done business come in, squat on the ground, and spend the hours in smoking, tale-telling, and gossip.

There is difficulty in the Havasupai mind at trading

524 177 hood for both boys and girls. These have been superseded by commercially manufactured toys.

853 The breast (or a bottle) is almost invariably offered when a young baby cries. When the infant is four or five months old, he is fed fresh peaches, mashed by the mother's fingers on the metate, or soup from stewed, dried peaches. He also receives some premasticated morsels of corn or other items from the family meals, transferred by the mother's fingers from her mouth. At about one year the baby eats thin cornmeal mush, and the softer foods are no longer specially prepared for him, but meat and other coarse foods are ground on the metate, or premasticated until the baby has enough [462] teeth to chew adequately. An informant stated, "The mother does most of the feeding, but if she is busy, the father will do it. A man likes to do things for his baby."

Sitting and Crawling

854 868 At three or four months of age an infant is removed from the cradle and encouraged to sit alone. He is also permitted freedom to crawl on the ground. No babies were observed scampering rapidly over the ground in the way an experienced crawler will do on a smooth floor. An infant crawling out-of-doors appears to move cautiously, stopping frequently to sit up and handle clods, rocks, and sticks, or to investigate any obstacle he encounters. Parents usually let a baby explore unhindered. However, when an object is taken from a baby, it is not grabbed hastily nor is the baby handled roughly when he is removed from a place where the adults think he should not be. Parental behavior tends to be calm and gentle. If a protest is forthcoming from an infant whose play has been interrupted, it is seldom more than a puckered face or a brief wail. The mother may distract the baby with a toy, or she may simply turn her attention elsewhere after quietly telling the baby to be still. The baby may attempt to recapture his mother's attention, but he quickly loses interest and resumes his playing.

231 Dogs, which are attached to every household, may approach a cradled child to sniff or lick his hands or face. An infant seldom shows fear of a dog, but if he does, the dog is quickly and loudly driven away. This constitutes the most frequent occurrence of harshness in connection with the baby, for a dog is often addressed sharply and may be kicked or beaten if it doesn't respond immediately. Nevertheless, dogs are nearly always within the baby's range of vision, and by the time he reaches the crawling stage, a baby begins to play with any dog that stays within reach of his hand. The dog's ears and tail may be pulled or twisted, or its eyes poked by small fingers; later, as the child grows more active, a dog is sat upon, tumbled about, and pinched; and still later on, it is lassoed, tied, and dragged about.

757 [753] [262] It is believed that blisters on the tongue or inside the mouth of a nursing infant are a result of the mother's breaking the salt taboo. The blisters are treated

The siblings of a child's parents have no special institutionalized roles in connection with the child, but the infant's father's sister or his mother's sister may enact the role of the maternal grandmother at his birth if the grandmother is absent or deceased. Also, an orphan or an illegitimate child may become the ward of a paternal or maternal aunt or uncle. An orphan sometimes becomes the ward of an adult sibling, of a sibling of any one of his four lineal grandparents, or of another distant relative. 604 [848]

Terminology for parallel cousins coincides with that for siblings. Regardless of residence, parallel cousins are considered almost as close as siblings, but they are particularly close if they grow up in the same camp. Marriage with both parallel and cross cousins is forbidden as it is with any recognized genetic relative. If a younger sibling of a child's father or mother happens to be of the same age and sex as the child and is a member of the same residence group, the association may lead to a bond of mutual regard comparable to that between parallel cousins. 605 [582]

Children are instructed by their parents and grandparents in their economic and social roles. Verbal instructions are given when a child is asked to perform a task, but he learns largely from observation of, and participation in, family and tribal activities. The manner in which a child's parent of the same sex does his work is held up to the child as a model of the behavior he is expected to learn. In all verbal instructions, one theme is stressed and reiterated; both girls and boys are admonished to be industrious. The exhortation is phrased in the negative, however. "Don't be lazy. If you lie around all day, your family will have nothing." 861 867

While hunting and gathering are no longer significant activities, dependence upon agriculture continues. In recent years, since mechanized methods of preparing the land for planting have been adopted to some extent by tribal members, operation of farm machinery has been limited to men. Formerly, men and women shared all phases of gardening with the exception of irrigation, which was restricted to men. These changes have reduced the economic contributions which women make directly in obtaining the family's food supply with the exception of those who become wage earners. Consequently, little girls spend much less time helping their mothers in gathering and gardening activities than once was necessary. 241 462 [177] [857]

The former pattern of instructing a child in his primitive technological roles has become less significant relative to his welfare and existence as an adult. Factors which have a bearing upon this cultural change are: (1) establishment of the Havasupai Indian Reservation, and increasingly permanent residence thereon due to depletion of natural resources; (2) subsequent partial dependence of the Havasupai upon financial aid from the Office of Indian Affairs, and (3) school attendance. 178 182 861

Much of a girl's role is outlined for her indirectly. Children of both sexes share their games and, to some extent, their work. Verbal definition 861

Sharing the Work

462 593 Cultural division of labor places responsibility for most work upon one sex or the other, but husbands and wives share certain activities, one assisting the other upon suggestion or request or on his or her own initiative.

Emphasis placed on the division of labor is not such that a man feels his participation in ordinarily feminine tasks detracts from his masculine dignity, and men may assist with camp work, including food preparation. A man does not customarily command or direct his wife in her work. A young wife assists her mother or mother-in-law in camp work, but she has a certain independence even in this situation. A woman's independence increases as she advances in age and finally becomes mistress of her own household.

Havasupai culture prescribes no precise or formal pattern of personal service which a wife is obliged or privileged to perform for her husband either in daily routine or on ceremonial or other special occasions. Her work is perceived as work for the family unit rather than as attendance upon her husband specifically.

Authority and Accommodation

593 While a husband, in his dominant male role, exercises authority over his wife, and she must concede to his superior physical strength in matters of conflict, this does not imply that a Havasupai husband rules his wife with an iron fist. Personalities of both husband and wife are factors in every instance, it being possible to discover couples matched in a wide variety of temperaments from dominant husband-submissive wife to dominant wife-milquetoast husband. The larger proportion of couples fall between these two extremes with various shadings of adjustment to one another. A woman may contrive to win her own way by employing cleverness or such wiles as her temperament or intelligence may suggest.

593 562 A cultural ideal of wifely obedience is recognized by women who generally judge others of their sex on this standard but are unwilling or unable to perceive that it is equally applicable to themselves. Personal conflict situations arouse them to jealous defense of their own interests. The expressed ideal thus does not pervade the feminine mind to the extent that women individually form habits of automatic submission precluding recognition of self-interest. Instead, a wife weighs her desires and emotions and fights back in any way she can, often with the prospect of certain defeat or eventual compliance. Wifely submission of this type is a yielding to the inevitable rather than a willing or dutiful obedience.

593 578 Marital conflict is resolved as a private issue between husband and wife. While the social group takes no action, even in examples of extreme abuse or negligence, and public opinion supports husbandly dominance and

593 tion usually developing between affinal relatives, particularly mother-in-
578 law and daughter-in-law. One recent divorce stemmed from such a situa-
603 tion. The divorced woman told the investigator, "She (the mother-in-law)
604 wouldn't let me do anything with my children the way I wanted to. Every
time I corrected or tried to punish one, she stopped me and petted my
[586] children so I couldn't do a thing with them. I tried and tried, but I just got
tired of it, so finally I quit trying. That's why I started running around and
thinking about a divorce." In this instance, after the divorce, the mother-
in-law kept two of the children with her against the daughter-in-law's
wishes.

While a mother may harbor minor resentments against grandparents arising from differences over her children, serious disagreements seem to be infrequent. The common course at present when friction exists in an extended family is for the younger married couple to move away.

Economic Training

868 When a mother must work in the fields or hunt for wild plants, she
462 takes her children along if the situation permits. Otherwise, she leaves
them with a relative. She teaches small girls and boys to help her in her
easier tasks, and as her daughters grow they share her daily work. Al-
though a woman's sons are permitted more free time and their work is with
their father, they also help her with some of the campwork at her bidding
or by their own inclination. A woman does much of her work sitting on the
[516] ground, and it is a common thing for her to ask her son of any age to bring
an article to her or to perform some small task merely because she doesn't
wish to get up. Camp routine is such that any member of the family may
sometimes help with whatever work needs doing. Boys in a family do not
expect their mother or sisters to wait upon them in small things they can
easily do for themselves.

Relationship between a mother and her children includes respect for
593 the former, which seems to grow out of the child's affection and realization
861 of obligation rather than from any demand for it. While a mother expects
obedience and exercises a certain firmness, she resorts to punishment in-
frequently and is generally quite indulgent with small children. She appears
to win respect and obedience through kindness and unending patience. Nag-
ging was never observed. A child is seldom given the same request or
command more than once or twice; if he does not comply in a reasonable
time, he is rebuked or punished, or more frequently the matter is dropped,
at least for the time being.

Care of Others' Children

854
736 Adult women, married or unmarried, may temporarily or permanently
assume the role of mother to one or more children not their own but usually

[Text continues on page 130]

CHAPTER VI

ECONOMIC STATUS AND ROLE

Division of Labor

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Economic activities were not in precontact times as sharply sex-limited among the Havasupai as among some primitive groups. It is questionable whether more than two or three kinds of work were strictly limited to one sex or the other. Masculine occupations included hunting, skin dressing, and manufacture of clothing, weapons, and tools. Women gathered wild plant foods, cooked, prepared food for storage, manufactured baskets, pottery and a few miscellaneous articles, and took care of the children.

Predominantly Male Activities

Although agriculture was primarily a man's responsibility, all members of the family assisted at every stage. Spier (1928, 102-4) also made this observation. Housebuilding was another task commonly undertaken by cooperative efforts of both sexes, the heavier work being done by men. Trade was carried on by both sexes, although it was primarily the domain of the men.

Men did not weave baskets or make pottery, but members of both sexes occasionally engaged in all other occupations listed. Men were the hunters, but an entire family might help in locating game and driving it toward the hunter. A father sometimes trained his daughter to hunt if he had no son or if she showed inclination or skill in this direction. However, a girl so [224] trained did not hunt independently, and upon reaching adult status she might continue to hunt with her husband, but the ordinarily feminine tasks took precedence as her primary responsibility.

Spier (1928, 140) notes that tanning buckskin "is strictly a sex-limited industry, the handling of the skin from flaying the carcass to the finished moccasin or woman's dress is man's work alone." On the other hand, [114] James (1903, 231), who made a few observations during a brief visit and was perhaps less than an accurate reporter, recorded that "men and women [224] both dress the buckskins for which the Havasupai is so famous." As hunting laws now restrict the number of hides obtainable, only a few men were observed tanning hides. The casualness with which most tasks are undertaken and the delight of sharing work suggest that women may possibly have assisted in the tanning process and perhaps in clothing manufacture, but it is unlikely that women undertook the tanning operation independently. To- [281] day, when a man brings a hide to the sweat lodge to rub and stretch it while [478] he gossips, two or three friends may join in this operation, and it may be

462 that his womenfolk may have assisted in this casual way in former times
[476] when hides were tanned in plentiful supply for trade that would benefit the
[281] whole family.

Clothing manufacture was men's work, and a man cut and stitched for
[294] himself and all his dependents. However, as might be expected, influences brought a reversal of sex roles in this occupation. Availability of woven
[177] materials and of ready-made clothing brought a change of style also. Cotton dresses at first were stitched by hand, but today a few women use treadle sewing machines. Spier (personal communication, 1957) records
[184] that there were a couple of treadle sewing machines in use in 1918. All men's clothing and much of that worn by women is purchased ready-to-wear.

As mentioned previously, puberty dresses continued to be made by men as long as they were in vogue, and a few of the older men still know how to make them.

The art of chipping stone points has been in disuse for so long that
[324] several informants denied that the Havasupai ever made them. One old man explained that old men in his youth told him that points for arrows and
[821] spears came down to the earth on lightning, fell on trees, and slid to the ground unbroken for Havasupai use. Another man said that the Havasupai obtained stone points by picking up those shot at them by Apaches.

At the present time, points of fine workmanship and a variety of types and sizes may be picked up in the canyon, but younger informants urged me not to let the older people know I had collected any. As one woman
[775] phrased it, "In the old days they belonged to people who are dead, and it might bring a ghost around if you handle them." The same request was made concerning potsherds, which abound in a profusion of types. However, an archeologist was able to obtain permission to excavate in the canyon a couple of years later.

Women's Work

Women, exclusively, plaited sleeping mats, while both men and women braided yucca or tanned hide rope. It is likely that both sexes had a hand in preparation of materials and fabrication of the rubbed cedarbark slow match and of braided cotton cord which formed part of the strike-a-light. Springs and mattresses, hemp or nylon rope, and matches have replaced these articles, although young boys and men occasionally braid quirts.
[177] Women commonly made rabbitskin blankets, now no longer used, but they
[297] were sometimes assisted by old men. Cradleboards, still used for every baby, are made by women who also prepare the materials, but a woman may send her husband to gather willows for this purpose.

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Among those tasks commonly allotted to women, child care and cooking were the two which occupied most of her waking hours. While child care was primarily a feminine responsibility, men shared or assisted in it when they were at home, as previously described. Cooking, on the other hand, usually was not a regular occupation of a man even on a part-time basis, except for those men who lived alone or had no woman in the household. However, if an old couple lived alone and the man were the more robust of the two, he did the cooking or assisted with it. Whenever the wife was absent or indisposed for a brief interval, it was not beneath her husband's dignity to cook, although he might choose to eat with a relative if his dependents were not too numerous.

Women gathered wild plant foods within a short radius of camp, but trips of longer duration or greater distance were usually undertaken in company with their husbands who shared in the work. Gathering the pinyon harvest was a family project in which everyone worked and groups of families camped close together, making it a gala outing lasting two or three weeks. Each family moved from place to place until they judged their harvest adequate for their needs. [222] [476]

After the harvest of pinyons and other wild plants in which men helped, it was women's work to roast, husk, grind, and otherwise prepare the food for immediate use or storage. Likewise, women prepared for storage all foods harvested from the fields. Spier (personal communication, 1957) adds that men might also prepare food for storage, especially if they had no women to do it. [251]

Pottery was made by women, but its use was abandoned so long ago that the oldest living tribal members probably saw its manufacture only in early childhood if at all, and only a scant description could be obtained from informants. Location of clay deposits is still common knowledge, however, and one man pulled a sample of powder-smooth texture and almost white color from under the eaves of his house where it had been used for chinking. Clay deposits still exist in Cataract Canyon, notably near Navaho Falls and near the mouth of Ash Canyon, a tributary. Other clay deposits used are located on the plateau near Pine Spring and elsewhere. Clay was excavated either by women or men. [323] [317]

Basket weaving was exclusively woman's province, but basketry materials were sometimes gathered by men. [285]

The Havasupai did no beadwork or embroidery in early days. Twenty or 30 years ago several girls learned to do beadwork while in school at Fort Mohave, but few if any of them have used the technique in recent years. [306] [871]

Construction of houses and brush shelters used in summer is a family affair, and occasionally most of the community will join in building a house [342] [476]

462 for someone who needs help. The heavier work is done by men while women [342] generally do the thatching. However, with house design and materials chang- [476] ing, housebuilding is now a masculine task.

462 439 Barter was popular among both sexes, both within and outside the tribe, each individual trading the fruits of his own labors. Women usually traded baskets while men traded tanned or raw hides. Both might trade dried and seed corn, pinyon nuts, mescal, and other wild plant foods. Men sometimes traded buckskin clothing, powdered ocher, or tools of their own workmanship. Havasupai trading parties consisted of family units or all male groups; women of course did not go off alone to trade. The Havasupai also obtained articles from one neighboring tribe to be used as trade items with another neighbor. Spier (1928, 244) reports that "An active trade was conducted with the Navaho and Hopi to the east and with the Walapai and Mohave to the west. In fact, we may properly speak of a northern Arizona trade route from the Hopi to Mohave, independent of more southerly tribes and cut off from these to the north by the Grand Canyon." Buckskin was the Havasupai article most in demand among other tribes.

Recent Employment

461 177 562 Service ascribes a postulated increase in male prominence and a corresponding decrease in importance of woman's economic role, in part, to a change from male hunting and female gathering to a subsistence based mainly upon male agricultural activities, and, further, to "white influence" which, he writes, "is undoubtedly effective in promoting male predominance" (1947, 361).

This hypothesis appears subject to modification today. Spier (personal communication, 1957) supports the following conclusions:

First, a survey of women employed permanently or seasonally either on or off the reservation reveals that several maintain themselves, while many others contribute to the support of their parents, husbands, or children. Women remain active in gardening activities as they have always been, but some of the heavier work is reduced for both sexes by use of the tribally owned tractor operated on individual plots by an individual appointed by the tribal council.

Secondly, it is difficult to imagine that the white cultural group, which socially, politically, and economically accords women almost unprecedented status, rights, and privileges, can be responsible for promoting predominance of the Havasupai male or for minimizing the economic importance which the woman had under aboriginal conditions.

562 464 177 Women have not been idle at any stage of economic adaptation which the tribe has undergone beginning with depletion by the whites of natural

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of the neck skin of the deer. The upper was a single piece of soft dressed skin, lapping at the outside of the foot, where it was fastened with a silver Navaho button. The woman's moccasin was a two-piece upper, a toe piece and a tongue in one, and long ankle flap which was worn around the ankle. The single tie string was wound over this and its loose end tucked under a fold. 291

Jewelry worn by the Havasupai is obtained in trade from the Navaho and Hopi or from the trader's stores at Grand Canyon. 301 439

Although the Havasupai relies mainly on his agricultural products, meat is a part of the diet the year round and especially during the winter. During the winter months rabbit drives are conducted by the men and boys. They drive in a straight course instead of drawing in a circle as several other tribes do. They claim their numbers are too few for a "surround". The rabbits are shot; never clubbed. Deer, antelope, mountain sheep, squirrels, and raccoons are also hunted. The hunt is still of economic importance as a supplementary source of food. Guns now are used in hunting instead of the traditional bow and arrow of former times. 262 294 [462] [177]

A man's work consists of house building or at least performing the heavy labor such as cutting and setting posts and beams, tending his fields, dressing hides, and looking after his range cattle and horses. 462

HANDICRAFTS

The Havasupai make basketry in two techniques, twining and coiling. Baskets are the most important domestic utensils and in each household may be found several burden baskets, food trays, and one or two water bottles. When not occupied with her other duties, the Havasupai woman is generally engaged in her craft. 285 415 [482] 462

The best material for making twined baskets is the acacia, generally gathered green. If gathered dry, or dried and stored, the twigs are either soaked in water or buried in wet soil two or three days before using. Cottonwood and willow are used. [524]

The leaves are stripped from the twigs by drawing them through the hand protected by a piece of cloth. The twigs are split in three parts, beginning at the tip, by using the teeth and both hands. Only the two outside strips are used, the inside being discarded. A knife is used to scrape the strips to uniform thickness. To begin weaving, two pairs of twigs are held so they cross at right angles at their midpoints. A weft strip is bound two or three times across the junction and the ends are woven alternately over and under the ribs. The weaving is in clock-wise direction, with the right side (the inside of parching trays and the outside of most other baskets) of the basket toward the weaver. After twining twice around the four ribs, another rib is inserted and caught into the twin stitch. The end of the twig is softened in water so that it can be drawn in tightly by the weft. The butt of the twig protrudes on the under side of the basket beyond the stitch by which it is held. As the weaving progresses new warps are inserted, always regularly spaced. As a rule baskets begin with diagonal twining, the weft crossing two warps at a time. Some begin with simple twining, the weft crossing single ribs, but soon change to diagonal weave. Diagonal twining is much more rapid. In either case the warps are inserted one at a time, but weft elements are twined in pairs, new strips are added singly.

To finish the edge of trays, burden baskets, or water bottles, the warp ends that protrude beyond the woven fabric are split and thinned, then bent to lie along the rim, and bound together with a stitch.

The burden baskets and water bottles are decorated with simple designs made by introducing different varieties of twining and with black from the Martynia or devil's claw. They have loops for carrying. The 285 415? 531 [482]

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after dark, especially near a graveyard, which is dangerous at any time, for fear of encountering ghosts. 775 [769]

Souls of the dead are said to go to the north where they live much the same as here on earth, but what the hereafter is like or its location may be is indefinite, even among the oldest members of the tribe. Objects such as rocks and trees have no souls. [774]

Spirits in distinction to souls, are limited. In almost every case they are *shaman's* familiars. No one has seen a spirit, but every *shaman* claims to have one within his chest. When he wants to find out something he sends his spirit out for awhile—probably a day and night. When he goes out into the night, his spirit is heard yelling to him from a distance. His spirit reenters his mouth and makes peculiar noises, and talks. The *shaman* closes his eyes and appears to be singing, but in reality it is his spirit relating what it saw. The distinctive qualities of the spirit are not usually described, but those specified include, a hawk, a wolf, and the spirit of the mythical being who made the deer. A *shaman* sings over a child subject to fainting spells and finds that when his mother was first pregnant she heard a hawk calling. The child has a spirit in him; it is the hawk. In some cases the *shaman* carries off the hawk spirit and the child lives. 776 756 [755]

Although the Havasupai address their prayers to the earth, sun, rocks, trees, wind, and water, spirits are not generally localized. 776

A long time ago the mythical people created spirits and put them somewhere, so one can dream of them, get them, and thus become *shamans*. Spirits are not about in the trees, rocks, wind, but one is in an ever-flowing pool of water located in a side canyon beside the Colorado River in the Hualapai country. The pool has a rough rock wall around it. When people look down on it from the rim of the canyon, the water wells up although it is not hot. Scattered about are arrowheads, shell beads, and deer bones with incised decorations, probably placed there by some prehistoric people. [755]

A number of mythical beings are referred to in legends, especially Pagiyoga, who draws souls into the sky, and Pagiyova, who makes people live after they die. The latter is said to be the white man's God. However, these are not prayed to nor do they address the cultural heroes in prayer. [782]

Spirits are the cause of illness, with the exception of a few minor ailments due to natural causes, failure to observe taboos, or because of evil magical practices. It is thought that after a *shaman* dies he may send his spirit into the body of some man who in an improper manner may imitate his songs. That, the creator of deer sent his spirit into the hunter who carelessly killed the animals; and that, the spirit of the hawk enters the bodies of unborn children. 757 775 756

Among the Havasupai there are *shamans* who cure disease, those who set broken bones, treat wounds, fractures and snake bites, and *shamans* who study weather conditions and claim to bring rain. Apparently all three types dream, but only those who cure have familiar spirits. Men only can become *shamans*. 756 [762]

Shamanistic power is obtained by dreaming or by inheritance. Some men dream of rain, lightning or thunder, they also dream of a song to make rain, then they use that song and become weather *shamans*. Others inherit their power from a maternal uncle or grandfather. [757] [754]

The ratle of a *shaman* is a dried gourd mounted on a wooden shaft which extends entirely through it. A collar is cut on the handle and a buckskin thong wound around the protruding end of the shaft so it will not come off. Holes are drilled in the gourd to allow the fibrous structure inside to drop out so the sound will not have a muffled tone.

When a *shaman* is called in by a relative to cure some member of the family he arrives and performs at night. He sings over the patient while he holds the clenched knuckles of the left hand against the patient's forehead, and in his right hand he holds the rattle and slowly twists his body from one side to the other. He sucks out the 755 756

7:Spier E-5 (1918-1921) 1929
NT14 Plateau Yumans NT14
Havasupai

then, is the special form which the Havasupai have given to the combined Plains and apron dresses. Even this is not peculiar to them alone, for the Yavapai have an identical costume. Other tribes on the border of mingled distributions have made the combination in other ways; the Kaibab have added a short front apron over the Plains dress, the Navaho linked two squares of cloth in the manner of the Plains dress, while quite another combination is the use of aprons and long dress alternately, as among the Klamath. Here we have illustrations of two kinds of cultural composition, namely combination and duplication.

We may observe another process, the transfer of a technique, in the sex division of labor. All work in skins is in the hands of Havasupai men from the butchery of a deer to the manufacture of a woman's dress. Skin dressing by men was also the custom among the Navaho, Yavapai, and Cocopa. Skin dressing and working in the Plains, on the other hand, is a womanly task, which suggests that in the Southwest the Pueblo idea of men as garment workers has been transferred to another material among their Rancheria neighbors.

Quite another analysis may be made in the case of games. It is possible to show that the moccasin game of the upper Mississippi drainage and the Southwestern hidden ball game, while superficially alike, are so because of convergent development.

To turn to quite another sphere, we find here ownership of fruit trees independent of the ground on which they stand, a feature strongly reminiscent of parts of Melanesia and the west coast of Africa. The factors in this development are obvious. Havasupai ownership of land is really ownership of the produce of the land, which is looked upon as so much personal property. Like other personal belongings, the standing crops are ordinarily cut down and burned on the death of their owner. Fruits (peaches, ultimately derived from Spanish sources, and nuts) were seemingly brought in as personal possessions and maintained as such. It is, then, quite in harmony with Havasupai sentiment toward land produce that the few fruit trees should be looked on as personal belongings to be disposed of by testament or sale regardless of the site they occupy.

stream into ditches with a speed of flow sufficient to divert a considerable amount of water. It is then carried through the village and into the fields. Most of the irrigation canals are simply small ditches dug in the sand, banked slightly on the sides. The main ditches are as much as two feet deep and three feet wide, but the laterals are much smaller. These are dug from the main ditches to the individual garden plots which may then be watered as necessary. Each field is divided by long mounds of earth into sections which are watered one at a time by letting the excess from one into the next until the entire field is well soaked. Whenever the water must be carried across the mouths of side canyons where ditches would be frequently washed out in storms, small aqueducts have been constructed with piping and cement. The Indian Service has made plans to install new diversion dams and three new aqueducts with permanent footings at a cost of many thousands of dollars. The old system is a primitive one, but it has stood the test of time, for the Havasupais have been irrigating for centuries.

In preparing the fields for the first planting in April, the old buckthorn planting stick as an agricultural tool has given way to the plow, scraper, harrow and disc as well as shovels and hoes. Most of this equipment, along with several cultivators, mowers and one tractor, belongs to the Tribal Council which rents it out for services or money. Unfortunately, most of these tools are badly cared for since the Havasupais seem to have little mechanical ability. Men, women and children plant, but the men do most of the field preparation, irrigation and fence building and repair. The age old prayer at the first planting is still a very important part of this spring activity.

The more than 280 Havasupais speak a dialect which, along with that spoken by the Walapais, the Yavapais and the Tonto, has been classified as the eastern division of the Yuman stock. Havasupai and Walapai are particularly close, the dialects being no more different from each other than are "Bostonian" and "Brooklynese." The cultural affinities of these two groups are equally close and their members live comfortably in each other's midst and frequently intermarry.

Physically the Havasupais bear a close resemblance to the Indians of the Lower Colorado. They are of medium to short stature and inclined to fatness. Their complexions are relatively light and they smile easily and winningly.

[683
754] versal punishment of death. Like most other Indians, they have a good understanding of the practice of surgery, and a remarkable knowledge of anatomy.

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Labor is not regularly divided, except between the sexes; save that among the men, arrow-making and some such special arts are more practiced by those who excel in them than by others, and basket-making among the women. The men do all the hunting, bringing the game to camp, and skinning the larger kinds; the women cutting it up and preparing it for drying or cooking. Both men and women gather the agave plant, in its season, with many festivities, vying in the preparation of it for mescal, although the burden of the labor in burning it falls to the women. The men break up the soil, lay out and dig the acequias, etc., performing the heavier agricultural work, as well as the planting, while the women weed the crop and assist in hoeing. When the corn ripens, the women gather it and bring it in, make it ready, and store it in the little stone and adobe granaries under the cliffs, and in little obscure rock shelters. They also cook all foods, make baskets and most other implements of household use, while the men cut out and sew the clothing both for themselves and for the women. Much of the heavier part of the work and drudgery falls on the women, who seem, however, perfectly contented with their really hard lot.

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Sedentary agriculturists in summer, the Ha-va-su-pai produce immense quantities of datila, mescal, water-tight basket-work, and arrows. Nomadic hunters in winter, throughout the choicest ranges of the Southwest, they have become justly famous for the quantity, fineness, and quality of their buckskins, which are smooth, soft, white as snow, yet thick and durable. These buckskins, manufactured into bags, pouches, coats, and leggins, or as raw material, are valued by other Indian tribes, even as far east as the Rio Grande, as are the

[281]